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## PATENT SPECIFICATION



*Application Date: Feb. 6, 1924. No. 3129/24.*

**233,416**

*Complete Left: Oct. 7, 1924.*

*Complete Accepted: May 6, 1925.*

### PROVISIONAL SPECIFICATION.

#### Improvements in Aerial Receiving Systems for Wireless Signalling.

We, TOM GORDON THREKELD, of 33, Milner Street, Manchester, and ARTHUR WILLIAM WRIGHT BUTTERFIELD, of 226, Great Western Street, Manchester, British subjects, do hereby declare the nature of this invention to be as follows:—

It is known that the reception of radio signals, especially the reception by amateurs of broadcast telephonic communications, is apt to be impaired by local electric disturbances due, for instance, to trams in the vicinity, electric lifts in the same or neighbouring buildings, etc.

The object of this invention is to provide an aerial receiving system in which the effect of such local disturbances may be substantially obviated.

According to this invention I provide a wire or series of wires mounted parallel to and in proximity to the receiving aerial and earthed independently of the

aerial, for instance, at the end opposite to that of the down-lead from the aerial.

Preferably the receiving aerial is provided with an earth mat or counterpoise, while the wire or wires are directly connected to earth.

Preferably also a number of wires is employed and these are arranged along the edges of a prism along the axis of which the receiving aerial lies.

Similarly, earthing wires connected to these wires which surround the aerial are also arranged along the edges of a prism and the down lead from the receiving aerial lies along the axis thereof.

The length of the shielding wire or wires is preferably greater than that of the aerial.

Dated the 6th day of February, 1924.

CARPMAEWS & RANSFORD,

Agents for Applicants,

24, Southampton Buildings, London, W.C. 2.

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### COMPLETE SPECIFICATION.

#### Improvements in Aerial Receiving Systems for Wireless Signalling.

We, TOM GORDON THREKELD, formerly of 33, Milner Street, now of Roseleigh, Crofts Bank Road, Urmston, Manchester, and ARTHUR WILLIAM WRIGHT BUTTERFIELD, of 226, Great Western Street, Manchester, both British subjects, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

It is known that the reception of radio signals, especially the reception by amateurs of broadcast telephonic communications, is apt to be impaired by local electric disturbances due, for

instance, to trams in the vicinity, electric lifts in the same or neighbouring buildings, etc.

The object of this invention is to provide an improved aerial receiving system in which the effect of such local disturbances may be substantially obviated.

According to this invention I provide a wire or series of wires mounted parallel to and in proximity to the receiving aerial and earthed independently of the aerial only at the end opposite to that of the down-lead from the aerial.

The invention is illustrated by the accompanying drawing, in which *a* is the receiving aerial with the down-lead *b*,

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and  $c$ ,  $c$ , are two wires mounted on each side of and parallel to the aerial  $a$ , and having their ends which are remote from the down-lead earthed.

5 Preferably the receiving aerial is provided with an earth mat or counterpoise.

Several wires such as  $c$ ,  $c$ , may be employed, and these may be arranged along the edges of a prism along the axis 10 of which the aerial  $a$  lies.

Tuning and damping devices such as the inductance  $d$  and resistances  $e$ ,  $e$ , may be inserted in the earthing wires.

15 Preferably the shielding wires  $c$ ,  $c$ , are, as shown, longer than the aerial  $a$ .

Having now particularly described and ascertained the nature of our said inven-

tion and in what manner the same is to be performed, we declare that what we claim is:—

1. The combination with a receiving aerial wire of a wire or wires supported parallel to and in proximity to the receiving aerial, and earthed independently thereof only at the end opposite to that of the downlead from the aerial, substantially as described.

2. Aerial receiving systems for wireless signalling, substantially as described.

Dated this 17th day of October, 1924.

CARPMAELS & RANSFORD,  
Agents for Applicants,  
24, Southampton Buildings, London,  
W.C. 2.

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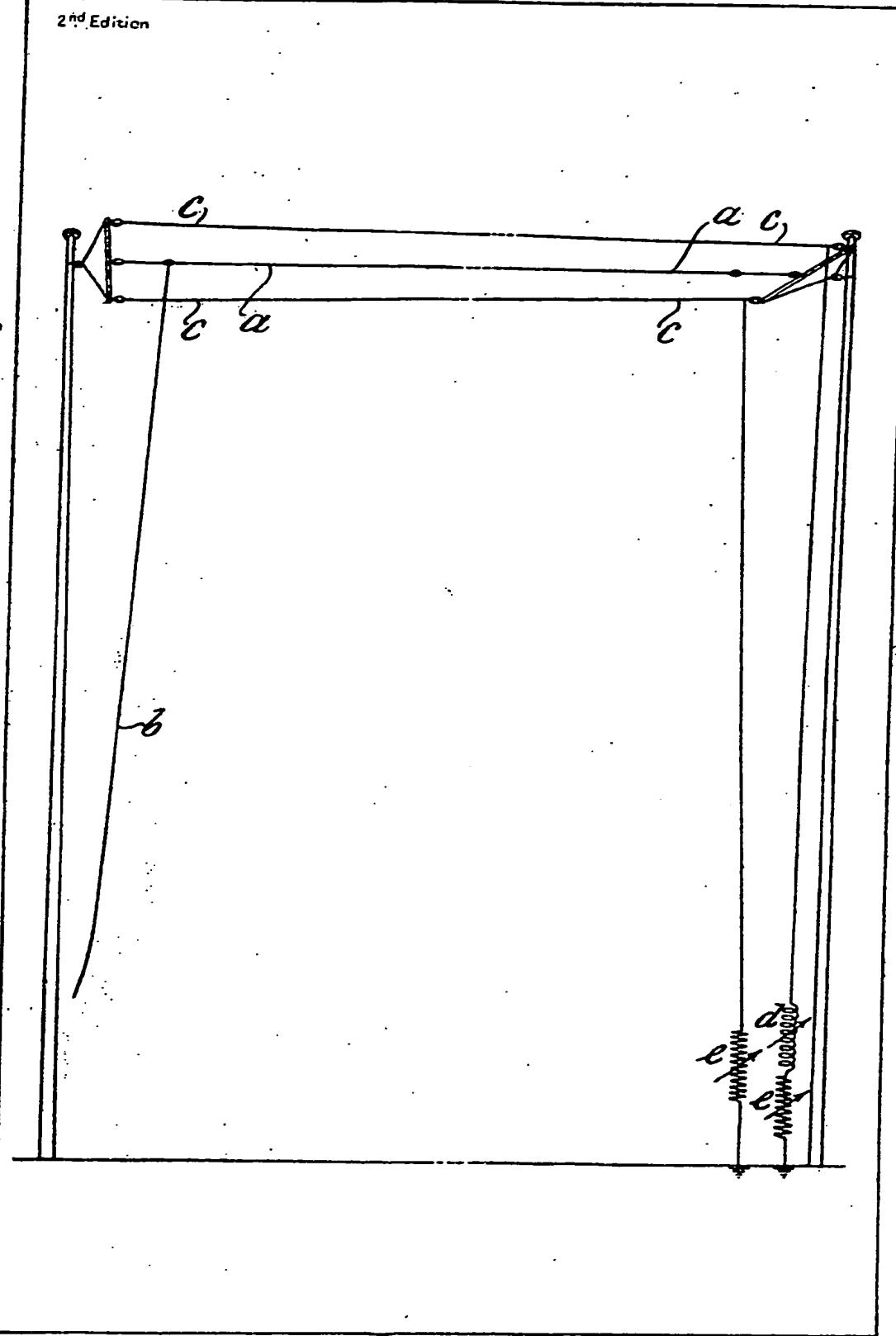
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1 SHEET

2<sup>nd</sup> Edition

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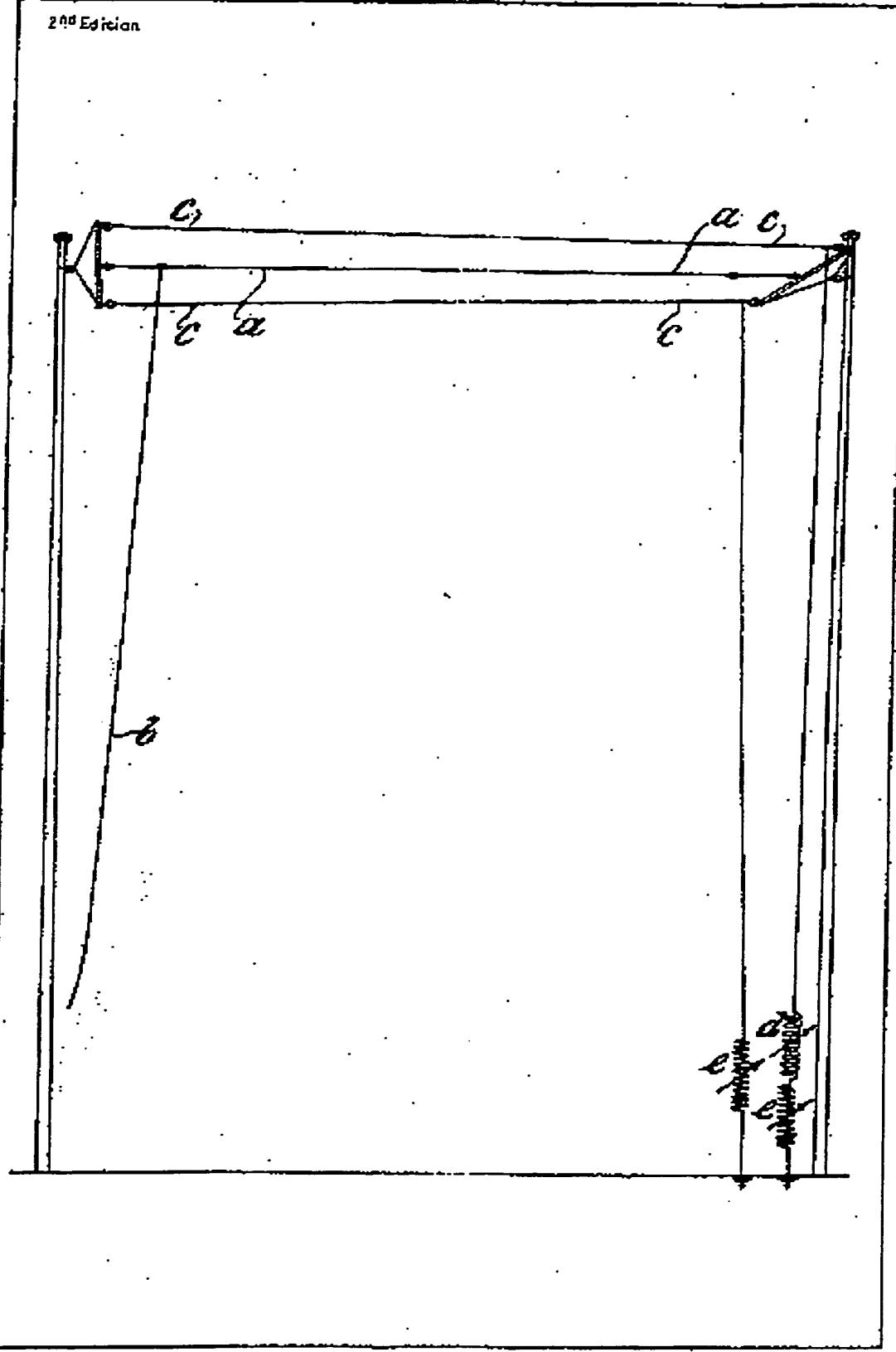
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